THE IMPACT OF FAMILY RELATIONSHIP, GENDER, AND FINANCIAL KNOWLEDGE ON FINANCIAL RISK TOLERANCE

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ABSTRACT

This research is designed to analyze whether the family relationship, especially parents and children relationship, gender, and financial knowledge that respondents have whether could impact on financial risk tolerance. In this research, there are three independent variables that used to prove whether that three variables could impact the financial risk tolerance. The three independent variables there are family relationship, gender, and financial knowledge. The data in this research are primary data by using questionnaire and secondary data is the theories that used to support the explanation of this research. The total sample of this research is 270 respondents. Chi Square Test is used to test the hypotheses. The result of this research, there is no impact in family relationship on financial risk tolerance. Financial risk tolerance more easily affected by knowledge.

Keywords: family relationship, gender, financial knowledge, financial risk tolerance

I. INTRODUCTION

a. Background

Financial risk tolerance is the willingness of the investors to accept more risk to get higher return. There are several factors that could influence financial risk tolerance such as family relationship, gender, and financial knowledge. Family is the smallest unit or group in society. Family give an impact that quite big in someone mindset and behavior, especially their children because all of basic lessons and basic knowledge begins from the family. According to Kenneth Ryack (2011), there is literature that suggests the consumer and financial attitudes and behaviors of parents may have an influence on their children. For example, write a shopping list before shop, compare the price before purchase, record the spending, save the money, and so forth. The children usually also doing the same thing, because parents might have a significant influence. For example influence their children when making a decision. With the education that parents have, they could impact

their children's decision. If the level of education of parents high, they could influence or affect their children's decisions more than parents who have low level of education. Because if parents have high level of education, they have more knowledge, so they could give an advice or suggestion to their children, moreover if related with what their parents learned. But not always the relationship between parents and children could impact on financial risk tolerance. Because more mature peoples, the influence from outside like education and friends could make or change mindset and behavior.

Women generally more risk aversion than men. According to Binay K Adhikari and Virginia O'Leary (2011), women demonstrated more risk aversion than men because they considered themselves to be less knowledgeable about financial markets. Even thought women have knowledge and ability equal with men, but most of women are still not confident with their ability. Because women are more conservative in make a decision in investing, usually broker offered less risky investments (Wang, 1994 in Adhikari and O'Leary, 2011). Women who are conservative in their investment, means that they did not want to get loss, so usually they also less risk tolerance.

Financial knowledge is the knowledge possessed and understanding about financial matters or financial concepts. Many researches have found the relationship between risk tolerance and formal levels of education. Individuals who have education, assumed that they have more knowledge and better understanding than individuals who have not knowledge. The individuals who already got enough theories, they could predict what would happen. So, individuals who had enough knowledge and understand about finance usually more risk tolerance. Individuals who had knowledge and understand about finance, usually have a better decision and healthy financial condition.

b. Problem Statements

Based on the research background, the problem statements are:

a. Can the parents' education impact the financial risk tolerance of their children?

b. Can the gender impact the financial risk tolerance?

c. Can the children's knowledge impact the financial risk tolerance?

d. Can the parents and children relationship impact the financial risk tolerance?

c. Objectives of Research

This research is designed to understand the impact of family relationship, financial knowledge, and gender on financial risk tolerance on the primary data.

The objective of this research is to testify several thing, they are:

a. The author would to analyze the impact of family relationships, between parents' education and child, could impact their children, on financial risk tolerance.

b. The author would to analyze the impact of gender on financial risk tolerance. Means that who are more risk tolerant between men and women.

c. The author would to analyze the financial knowledge could impact the financial risk tolerance.

II. THEORITICAL BACKGROUND

a. Family Relationship

Family is the smallest unit or group in society. From the family, all of basic lessons and basic knowledge begins. So, parents have a big influence to their children. If children and parents have a good relationship, then children are willing to accept the values and norms that socialized or give by parents. But, more mature children, they already have their own thinking, so the parents cannot intervention their children decision. The parents only could give an advice or suggestion, but the decision in their children, because they already their own thinking.

b. Financial Knowledge

Peoples who are in university level are assumed that have more knowledge than peoples who are in non university level. For example peoples in college who are concentrate in finance, would understand about investment than peoples who are in high school. Because peoples in college learned more specific and detail about finance, while peoples in high school learn about economic in general. So, peoples who are have better or higher education about finance, generally more risk tolerance because they already learned the theories.

c. Gender

Men generally are more risk taking than women. According to Wang, 1994 in Adhikari and O'Leary, 2011, stated that because women are more conservative in make a decision in investing, usually broker offered less risky investments. According to that statement, women are tend to risk aversion or they tend to choose low risk and have less confident than men.

d. Financial Risk Tolerance

Risk always related with return. The theory also said that high risk, high return. So, many people thought that if they choose high risk, they would get higher return. The willingness to accept risk in order to get higher return called financial risk tolerance.

III. HYPOTHESES

Based on the explanation above, the author developed hypotheses to be tested in this study as follow:

H_{a1}: The parents' education impact the financial risk tolerance of their children

H_{a2}: There is the impact of gender on the financial risk tolerance

H_{a3}: There is the impact of children's knowledge on the financial risk tolerance

H_{a4}: There is the impact of parents and children relationship on the financial risk tolerance

IV. RESEARCH METHODOLOGY

a. Population and Sample

The population of this research is students at Atma Jaya University. The sample is the students at Atma Jaya University who already took financial management subject and the respondent's parents.

b. Data

For the main data, use questionnaires for the primary data. The author collected from the answer of respondents in the questionnaires. For the supporting data, the author got the information from internet, books, journals, and another sources. The supporting data used to support the explanation and to support the theories that are used.

c. Variable Measurement

Table 1. The Criteria of Financial Knowledge

The options of answer	Score	Criteria
Strongly disagree	1	If the score 4-8, the respondents less understand about finance
Disagree	2	If the score 9-11, the respondents not really understand about finance (moderate)
Agree	3	
Strongly agree	4	If the score 12-16, the respondents more understand about finance

Source: http://www2.uwstout.edu/content/lib/thesis/2009/2009klattm.pdf

Table 2. The Criteria of Risk Tolerance

The options of answer	Score	Criteria
If choose A	1	If the score 8-16 means that less risk tolerance
If choose B	2	If the score 17-23 means that moderate
If choose C	3	
If choose D	4	If the score 24-32 means that more risk tolerance

Source: Grable, J. E., & Lytton, R. H. (1999b) in Grable, J. E., & Lytton, R. H. (2001).

Table 3. The Criteria of Family Relationship

The options of answer	Score	Criteria
If choose A	1	If the scores 2-4, the relationship between parents and children is rarely
If choose B	2	If the score 5-7, the relationship between parents and children is not closed enough (moderate)
If choose C	3	
If choose D	4	
If choose E	5	If the score 8-10, the relationship between parents and children is closed

Source: Kenneth Ryack (2011)

d. Validity and Reliability Test

To measure the validity of the questionnaires, the author uses the result in column "Corrected Item Total Correlation". If the result in column "Corrected Item Total Correlation" are more than r table, means that the instrument are valid. To compare the result of "Corrected Items Total Correlation" and the r table, whereas df = n-2 with the significant level 5% (0.05) (Sujarweni, 2007).

To measure the reliability of the questioner, the author uses internal consistency method based on coefficient of *Cronbach's Alpha*. If the value of reliability > 0.60, means the instrument that be used is reliable.

e. Method of Analysis

Descriptive statistics is to give general description about the data or the demographic information. Chi-square test is to analyze whether the family relationship, gender, and financial knowledge could impact the financial risk tolerance. The hypotheses for chi-square test are:

H_{a0}: The children's financial risk tolerance is independent of the parents' education

H_{a1}: The children's financial risk tolerance is not independent of the parents' education

H_{a0}: The financial risk tolerance is independent of the gender

H_{a2}: The financial risk tolerance is not independent of the gender

H_{a0}: The financial risk tolerance is independent of the children's knowledge

H_{a3}: The financial risk tolerance is not independent of the children's knowledge

H_{a0}: The financial risk tolerance is independent of the parents and children relationship

H_{a4}: The financial risk tolerance is not independent of the parents and children relationship

The level of significant (α) in this test is 5% (0.05), and the result of the test:

If the probability > 0.05, H_0 is supported

If probability < 0.05, H_0 is unsupported

V. DATA ANALYSIS

a. Reliability and Validity Testing

Table 4. Reliability Test

	Result	Criteria	Reliable or Not
Family Relationship	0.943	> 0.60	Reliable
Financial Risk Tolerance	0.721	> 0.60	Reliable
Financial Knowledge	0.760	> 0.60	Reliable

From the total questionnaires that already collected are 270, and 60 questionnaires used to test the validity and reliability the instrument. As seen in Table 4, the reliability testing of family relationship, the value of *Cronbach's Alpha* is 0.943. The reliability testing of financial risk tolerance, the value of *Cronbach's Alpha* is 0.721. The reliability testing of financial knowledge, the value of *Cronbach's Alpha* is 0.760. So, the conclusion of reliability test, all of the result is more than 0.60, means that all of the questions in the questionnaire are reliable.

Table 5. Validity Test

	Result	Criteria	Valid or Not
Fam. Relationship_Q1	0.894	> 0.214	Valid
Fam. Relationship_Q2	0.894	> 0.214	Valid
FRT_Q1	0.464	> 0.214	Valid
FRT_Q2	0.394	> 0.214	Valid
FRT_Q3	0.468	> 0.214	Valid
FRT_Q4	0.326	> 0.214	Valid
FRT_Q5	0.323	> 0.214	Valid
FRT_Q6	0.646	> 0.214	Valid
FRT_Q7	0.341	> 0.214	Valid
FRT_Q8	0.376	> 0.214	Valid
Financial Knowledge_Q1	0.374	> 0.214	Valid
Financial Knowledge_Q2	0.653	> 0.214	Valid

Financial Knowledge_Q3	0.690	> 0.214	Valid
Financial Knowledge_Q4	0.558	> 0.214	Valid

For the validity testing of family relationship, there are two questions about family relationship. For the validity of financial risk tolerance, there are eight questions about financial risk tolerance. For the validity testing of financial knowledge, there are four questions about financial knowledge. As seen in Table 5, the value for each question about family relationship is 0.894 for Q1 and 0.894 for Q2. The value for each question about financial risk tolerance is 0.464 for Q1, 0.394 for Q2, 0.468 for Q3, 0.326 for Q4, 0.323 for Q5, 0.646 for Q6, 0.341 for Q7, and 0.376 for Q8. The value for each question about financial knowledge is 0.374 for Q1, 0.653 for Q2, 0.690 for Q3, and 0.558 for Q4. So, the conclusion of validity test, all of the results is more than 0.214, means that all of the questions in the questionnaire are valid. So, the conclusion from the reliability and validity test in this research is all of the questions in the questionnaires are valid and reliable.

b. Descriptive Statistics

Table 6. Descriptive Statistics

	N	Percent (%)		N	Percent (%)
Gender:			**Fathers' Occupation:**		
Men	116	43.0	Unemployed	5	1.9
Women	154	57.0	Labor	5	1.9
Major:			Employee	45	16.7
Management	163	60.4	PNS	46	17.0
Accounting	94	34.8	Educator (Lecturer or teacher)	15	5.6
IE	13	4.8	Doctor or nurse	5	1.9
Financial subject that already took:			Entrepreneur	113	41.9
1 course	17	6.3	Manager and professional	17	6.3
2 courses	64	23.7	Trader	19	7.0
3 Courses	58	21.5	**Mothers' Occupation:**		
More than 3 courses	131	48.5	Unemployed	96	35.6
Fathers' Last Education:			Labor	0	0
No degree	1	0.4	Employee	17	6.3
Elementary school	4	1.5	PNS	34	12.6

Junior high school	16	5.9	Educator (Lecturer or teacher)	18	6.7
Senior high school	74	27.4	Doctor or nurse	8	3.0
D3	2	0.7	Entrepreneur	65	24.1
S1	143	53.0	Manager and professional	7	2.6
S2	21	7.8	Trader	25	9.3
S3	9	3.3			
Mothers' Last Education:					
No degree	0	0			
Elementary school	10	3.7			
Junior high school	25	9.3			
Senior high school	81	30.0			
D3	19	7.0			
S1	125	46.3			
S2	8	3.0			
S3	2	0.7			

As seen in Table 6, descriptive statistic based on gender, the respondents consist of 116 men or 43% and 154 women or 57%. So the majority respondents who filled the questionnaires are women. Students who are interest with finance or who already took the financial courses, most of them are women or female students. For the descriptive statistic based on major consist of 163 persons from management or 60.4%, 94 persons from accounting or 43.8%, and 13 persons from *IE* or 4.8%. So, the most of respondents who filled the questionnaires are from management. The most of respondents are from management because in management, there is financial major and respondents who are concentrate in finance are the priority. For the descriptive statistic based on financial subject consist of 17 respondents who already took one course or 6.3%, 64 respondents who already took 2 courses or 23.7%, 58 respondents who already took 3 courses or 21.5%, and 131 respondents who already took more than 3 courses or 48.5%. So, the majority respondents are already took more than three courses about financial subject. As explained before that the priority is students who are concentrate in finance. Students or respondents who are concentrate in finance, at least already took three courses about finance, financial management course in third semester, advance financial management course in forth semester, and one elective course about finance. Fro the descriptive statistic about parents' last education, both of father and mother's last education are bachelor degree. For descriptive statistic based on parents' occupation, most of respondents' father work as an entrepreneur (41.9%) and most of respondents' mother are unemployed (35.6%).

c. Hypotheses Testing

1. Hypothesis 1 (H_{a1})

The hypothesis of the parents' education is:

H_{a0}: The children's financial risk tolerance is independent of the parents' education

H_{a1}: The children's financial risk tolerance is not independent of the parents' education

Table 7. Chi Square Test for Fathers' Education

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	145.886[a]	154	.667
Likelihood Ratio	106.059	154	.999
Linear-by-Linear Association	.057	1	.811
N of Valid Cases	270		

a. 164 cells (89.1%) have expected count less than 5. The minimum expected count is .00.

Table 8. Chi Square Test for Mothers' Education

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	187.921[a]	132	.001
Likelihood Ratio	123.610	132	.687
Linear-by-Linear Association	.004	1	.948
N of Valid Cases	270		

a. 142 cells (88.2%) have expected count less than 5. The minimum expected count is .01.

As seen in Table 7, the Pearson Chi Square of fathers' education in column Asymp. Sig is 0.667, more than 0.05, so H_0 is supported, means that the children's financial risk tolerance is independent or the fathers' education are not impact on the financial risk tolerance of their children, while the Pearson Chi Square of mothers' education in column Asymp. Sig is 0.001 (Table 8) less than 0.05, so H_0 is unsupported, means that the children's financial risk tolerance is not independent of the parents' education or the mothers' education are impact on the financial risk tolerance of their children. According to Ermisch and Pronzato (2010), parents' educational attainments have a large impact on their earnings and they may alter the "productivity" of their time investments in children, such as reading to the child, and they may affect children's aspiration, which means that the higher of parents' education, the higher income that received. Reading to the child, usually mothers who are read the book for children while fathers usually they busy with their work. Mothers' education has the impact on the financial risk tolerance of their children because the mothers, according to the result of the

questionnaires, most of them are unemployed or housewife. Because of that, the mothers have more time with their children. So, if the relationship is closed, children are willing to accept the values and norms that socialized by the parents.

The education of parents also could impact to their occupation. Means that with higher level of education of parents, they could got better job, than parents who are had lower level of education or even no school. Peoples or parents who have higher level of education, assumed that have more knowledge. Job that has higher salary, usually job that need higher knowledge and higher skill. Because job that has high salary, usually peoples work with their brain, while job that has low salary, usually peoples work with their muscles. The result of the respondents' parents, both of father and mother, there are significant, 0.000, is less than 0.05, so the parents' education could impact on the parents' occupation. The conclusion from the parents' education and parents' occupation is with higher level of education, they could get better job and could get better salary.

2. Hypothesis 2 (H_{a2})
   The hypothesis of the gender is:

   H_{a0}: The financial risk tolerance is independent of the gender

   H_{a2}: The financial risk tolerance is not independent of the gender

Table 9. Chi Square Test for Gender

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	38.562[a]	22	.016
Likelihood Ratio	42.862	22	.005
Linear-by-Linear Association	9.641	1	.002
N of Valid Cases	270		

a. 19 cells (41.3%) have expected count less than 5. The minimum expected count is .43.

The Pearson Chi Square in column Asymp. Sig is 0.016 (Table 9) less than 0.05, so H_0 is unsupported, means that the financial risk tolerance is not independent of the gender. So, there is an impact of gender on the financial risk tolerance. According to Jianakoplos and Bernasek (1998), also explain that women are more risk aversion in financial decision making than men, for example, women and men are difference in the allocation of their money or asset and the longevity of the investment. Men are tends to more risk taking than women. For the longevity, usually women are tends to take longer investment than men. According to Deaux and Emswiller (1994) and Beyer and Bowden (1997) in Binay K Adhikari and Virginia O' Leary (2011) explain that women are less risk tolerance and more risk aversion than men although they have ability and performance equal to men. So, although women have knowledge and ability equal or more than men, but usually women are less confident about their ability and knowledge, especially in financial matters.

3. Hypothesis 3 (H_{a3})

The hypothesis of the financial knowledge is:

H_{a0}: The financial risk tolerance is independent of the children's knowledge

H_{a3}: The financial risk tolerance is not independent of the children's knowledge

Table 10. Chi Square Test for Financial Knowledge

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	265.005[a]	220	.020
Likelihood Ratio	212.983	220	.620
Linear-by-Linear Association	9.178	1	.002
N of Valid Cases	270		

a. 246 cells (97.2%) have expected count less than 5. The minimum expected count is .00.

As seen in Table 10, the Pearson Chi Square in column Asymp. Sig. (2-sided) is 0.020 less than 0.05, so H_0 is unsupported, means that the financial risk tolerance is not independent of the children's knowledge or the financial knowledge have an impact on the financial risk tolerance. According to Mandell and Klein (2009), many policy makers believe that the impact of poor decision making due to lack of financial knowledge can be overcome through mandated financial education. Means that, education is one of the factors that influence students' knowledge. The higher level of education, more knowledge that they got. For example, knowledge about finance. So assumed that they are more understand about financial matters. Because they are already got the theories and understand, so they are more risk tolerance. The higher level of financial knowledge, the financial risk tolerance also increases.

4. Hypothesis 4 (H_{a4})

The hypothesis of the parents and children relationship (family relationship) is:

H_{a0}: The financial risk tolerance is independent of the parents and children relationship

H_{a4}: The financial risk tolerance is not independent of the parents and children relationship

Table 11. Chi Square Test for Family Relationship

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	163.035[a]	154	.294
Likelihood Ratio	152.695	154	.515
Linear-by-Linear Association	.011	1	.918
N of Valid Cases	270		

a. 182 cells (98.9%) have expected count less than 5. The minimum expected count is .01.

As seen in Table 11, the Pearson Chi Square in column Asymp. Sig is 0.294 more than 0.05, so H_0 is supported, means that the financial risk tolerance is independent of the parents and children relationship or there is no impact of the family relationship on the financial risk tolerance. As explained previously, because there are many influence from outside, like friends and education, the children could change their behavior and mindset. More mature children, they also have own thinking, so the parents cannot intervention their children's decision. The parents only could give an advice or suggestion, but who decided the decision is their children. According to the Kenneth Ryack (2011), there is no significant relationship is found between the financial risk tolerance of the children and the parents, means that there is no relationship between parents and children on the financial risk tolerance. The amount of time the children report that their parents had spent teaching them about financial matters also does not appear to impact their financial risk tolerance (Kenneth Ryack, 2011). So the relationship between parents and children does not guarantee that parents could influence the risk tolerance of their children.

VI. CONCLUSION AND SUGGESTION

a. Conclusion

The financial risk tolerance every people are difference. The factors that influence the financial risk tolerance every people also difference one and another. In this research, the author wants to prove whether family relationship, gender, and financial knowledge could impact on the financial risk tolerance. The conclusion of this research derived from the hypothesis testing to answer the problem statement:

1. The hypothesis 1 (H_{a1}) which state that parents' education impact on the financial risk tolerance of their children. In this variable, divided into two analyses. First is fathers' education, and second is mothers' education. For the fathers' education, H_{01} is supported. Means that, the financial risk tolerance of the children is independent of the parents' education or the fathers' education has no impact on the financial risk tolerance of their children. For the mothers' education, H_{01} is unsupported. Means that, the financial risk tolerance of the children is not independent of the parents' education or the mothers' education has an impact on the financial risk tolerance. So, in the parents' education hypothesis, the result of the test is partly supported.

2. The hypothesis 2 (H_{a2}) which state that there is the impact of gender on the financial risk tolerance, H_{02} is unsupported. So the alternative or H_{a2} is supported, means that the financial risk tolerance is not independent of the gender or there is the impact of gender on the financial risk tolerance.

3. The hypothesis 3 (H_{a3}) which state that there is the impact of children's knowledge on the financial risk tolerance, H_{03} is unsupported. So the alternative or H_{a3} is supported, means that the financial risk tolerance is not independent of the children's knowledge or the financial knowledge have an impact on the financial risk tolerance.

4. The hypothesis 4 (H_{a4}) which state that there is the impact of parents and children relationship on the financial risk tolerance, H_{04} is supported. Means that, the financial risk tolerance is independent to the parents and children relationship or there is no impact of the family relationship on the financial risk tolerance.

In general, the conclusions are gender and children's knowledge is not independent or has an impact on the financial risk tolerance. The parents' education and the parents and children relationship (family relationship) are independent or have no impact on the financial risk tolerance.

b. Limitation of the Research

The limitation in this research are in family relationship only analyze the relationship between children and parents, the spousal relationship is not analyzed. For the respondents, the author only distribute the questionnaires for the respondents who already took financial course, at least one course, because respondents who already took financial course assumed understand about financial matters and would be easy to answer the questions. In parents section, the question only the demographic information such as occupation and last education of the parents. The hypothesis testing used in this research is Chi Square.

c. Suggestion

Based on the limitation of the research above, the suggestions for the other researchers are to analyze not only the relationship between parents and children, but also the spousal relationship. And for the parents section, would be better to add more questions and not only the demographic information, so the result would be more accurate. Choosing the appropriate statistical technique for further research is also suggested by using other type of analysis, such as Multiple Regression and Logistic Regression.

BIBLIOGRAPHY

Adhikari, B. K. and O'Leary, Virginia. (2011), "Gender Differences in Risk Aversion: A Developing Nation's Case", *Journal of Personal Finance*, Vol. 10, No. 2.

Barnasek, A. and Shwiff, S. (2001), "Gender, Risk, and Retirement", *Journal of Economic Issues*, Vol. 35, No. 2, pp. 345.

Chan, S. F., Chau, A. Wai-Lap., and Chan, K. Yin-Kwan. (2012), "Financial Knowledge and Aptitudes: Impacts on College Students' Financial Well-Being", *College Student Journal*, Vol. 46, No. 1.

Chinen, K. and Endo, Hideki. (2012), "Effects of Attitude and Background on Personal Financial Ability: A Student Survey in the United States", *International Journal of Management*, Vol. 29, No. 1.

Cornett, M. M., Adair, T. A, Jr., and Nofsinger, J. (2009), *Finance: Applications and Theory*, The McGraw-Hill Companies, Inc., New York.

Damodaran, A. (2008), *Strategic Risk Taking: A Framework for Risk Management*, Pearson Education, Inc.

Ermisch, J. and Pronzato, C. (2010), "Causal Effects of Parents' Education on Children's Education", *Economic and Social Research Council*, No. 16.

Fisher, P. J. (2010), "Gender Differences in Personal Saving Behaviors", *Journal of Financial Counseling and Planning*, Vol. 21.

Gilliam, J. E., Goetz, J. W. and Hampton, V. L. (2008), "Spousal Differences in Financial Risk Tolerance", *Journal of Financial Counseling and Planning*, Vol. 19.

Goksel, I. (2013), "The Influence of Maternal Employment on Children's Long Run Achievement: Case of Izmir", *Anadolu International Conference*, No. 156.

Grable, J. E. and Lytton, R. H. (2001), "Assessing The Concurrent Validity of The SCF Risk Tolerance Question", *Journal of Financial Counseling and Planning*, Vol. 12(2).

Harrington, S. E. and Niehaus, G. R. 2003. *Risk Management & Insurance*. McGraw-Hill.

http://dictionary.reference.com/browse/family.

http://financial-dictionary.thefreedictionary.com/Risk+Tolerance.

http://id.wikipedia.org/wiki/Keluarga.

http://web.worldbank.org/WBSITE/EXTERNAL/TOPICS/EXTGENDER/0,,contentMDK:20193040~pagePK:210058~piPK:210062~theSitePK:336868,00.html.

http://www.genderandhealth.ca/en/modules/introduction/introduction-genderasadeterminantofhealth-Shayna-03.jsp.

http://www.investopedia.com/terms/s/strategic-financial-management.asp.

http://www.who.int/gender/whatisgender/en/

Jacobs-Lawson, J. M. and Hershey, D. A. (2005), "Influence of Future Time Perspective, Financial Knowledge, and Financial Risk Tolerance on Retirement Saving Behaviors", *Financial Services Review*, Vol. 14(4), pp. 331-344.

Jianakoplos, N. A. and Barnasek, A. (1998), "Are Women More Risk Averse?", *Economic Inquiry*, Vol. 36, No. 4, pp. 620-630.

Jones, C. P. (2010), *Investments: Principles and Concepts*, Eleventh Edition, John Wiley & Sons Ltd., United Kingdom.

Klatt, M. E. (2009), "An Assessement of Women's Financial Literacy", Available at: http://www2.uwstout.edu/content/lib/thesis/2009/2009klattm.pdf, *University of Wisconsin-Stout*, United States. Accessed on December 2009.

Lam, J., (2003), *Enterprise Risk Management: From Incentives to Controls*, John Wiley & Sons, Inc., New Jersey.

Mandell, L. and Klein, L. S. (2009), "The Impact of Financial Literacy Education on Subsequent Financial Behavior", *Journal of Financial Counseling and Planning*, Vol. 20.

Ryack, K. (2011), "The Impact of Family Relationships and Financial Education on Financial Risk Tolerance", *Financial Services Review*, Vol. 20, No. 3, pp. 181.

Sekaran, Uma. and Bougie, Roger. (2009), *Research Methods for Business: A Skill Building Approach*, Fifth Edition, John Wily & Sons Ltd., United Kingdom.

Sujarweni, V. W. (2007), *Belajar Mudah SPSSS untuk Penelitian Skripsi, Thesis, Disertasi & Umum*, Global Media Informasi, Yogyakarta.

Tavakol, M. and Dennick, R. (2011), "Making Sense of Cronbach's Alpha", *International Journal of Medical Education*.

Tjondrowidjojo, E. K. 2013. Behavioral Finance Study toward Credit Card Holders. *Thesis*. Graduate Program in Economic. Atma Jaya University. Yogyakarta.